

Factors can impact quality of Health.

Jin Hee Lee

04/01/2023

The impact of health status on quality of life was measured using two datasets: the Behavioral Risk Data: Health-related Quality of Life (HRQOL) and the US Population by Zip Code. The US census dataset includes population counts broken down by gender, age, and location using Zip code, city, and state. The data covers 52 states, including the district of Columbia and Puerto Rico.

The primary table was “Behavioral Risk Data: Health-related Quality of Life”. The Center for Disease Control and Prevention’s (CDC) conducts “Healthy Days Measure” survey that was used to collect data starting in 1993. The survey was incorporated into the state-based Behavioral Risk Factor Surveillance System (BRFSS), which is a continuous survey of US adults aged 18 and older. The survey included four questions assessing self-rated general health, physical health, mental health, and activity limitations. The survey yielded two data value types: mean unhealthy days and percent with 14 days of physically and/or mentally unhealthy days out of 30 days. The data were adjusted by break-out column, which included 7 age groups, six race/ethnicity groups, and gender with male and female. The data values were calculated by summing the number of physically and mentally unhealthy days, capped for 30 days. The survey in this data was conducted annually from 1993 to 2010. After ETL process, the primary table shows from year, 51 states (Puerto Rico was not included) with sample size, data value, and the total rows of the primary table was 101,429. There are also Question, location, and breakout tables to reference to the primary table. The StatePopulation2000 table and statePopulation2010 table were combined with the primary table to get population on each state.

In 2010, the average sample size was 8,150, and the total US population was 312 million. The total sample size in 2010 was 416,000, which represented 0.13 % of the US population. The average value measuring general unhealthy days out of 30 days was 5.85, 6.65, and 7.39 days in 1993, 2000, and 2010, respectively. This result suggests that an average of 0.74 to 0.80 unhealthy days were added approximately every 10 years.

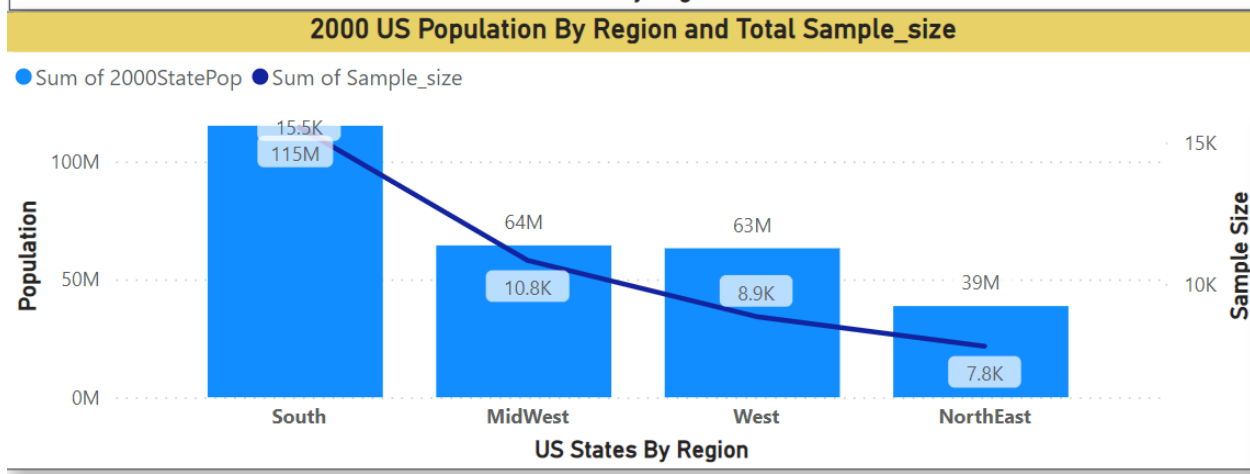
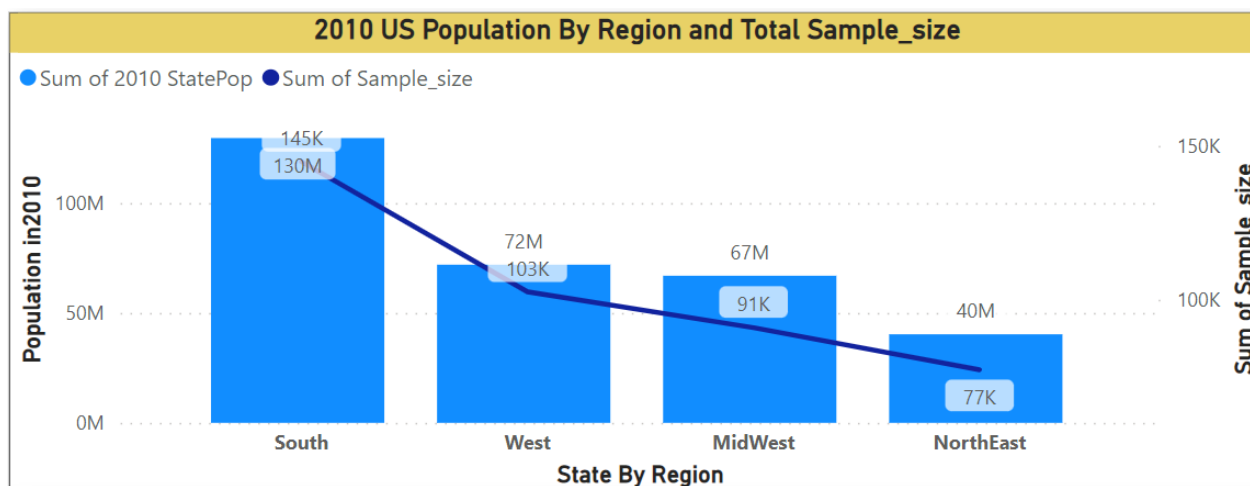
The 51 states were grouped into four regions based on the Census Map (see source): West, Midwest, South, and Northeast. The South region showed the highest level of unhealthiness in 2010 with an average of 12.54 unhealthy days, which is an increase of 5.69 days since 2000. The West region had an increase of 3.59 unhealthy days since 2000 while the Midwest and Northeast had only 0.7 and 1.51 days of increased unhealthy days, respectively.

When comparing the sample sizes given in both 2000 and 2010, The South region had the largest sample sizes in both years due to its larger population compared to the other regions. The average sample sizes based on the population of each region in 2010 were 0.01% for the South region, 0.14 % for the west, 0.13 % for the Midwest, and 0.19 % for the Northeast.

1993-2010 Average Unhealthy by Region			
South	NorthEast	West	MidWest
7.82	7.31	7.00	6.81

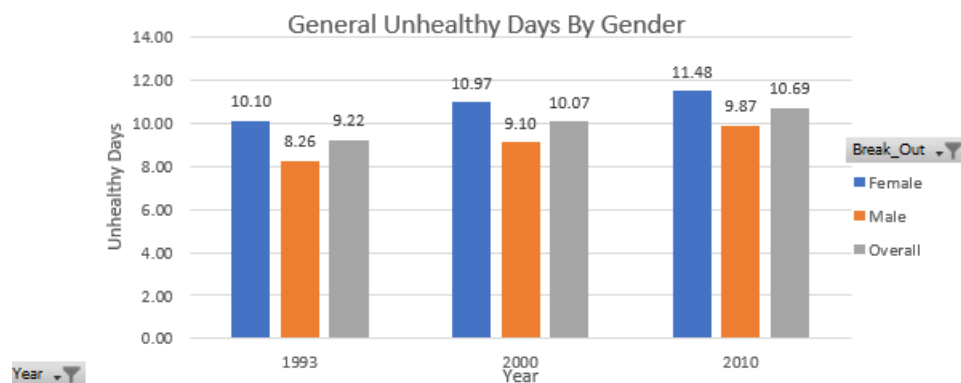
2000 Average Unhealthy Days By Region			
MidWest	South	NorthEast	West
10.93	6.85	6.13	6.12

2010 Average Unhealthy Days By Region			
South	MidWest	West	NorthEast
12.54	11.63	9.71	7.64

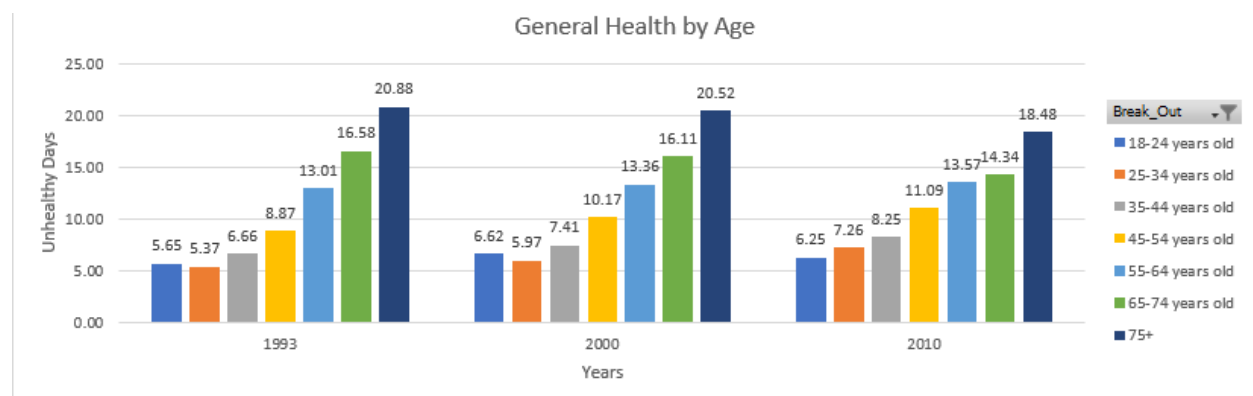


Other demographic factors that might impact quality of life are age, gender, and race/ethnicity. By analyzing these factors, we can estimate the health and activity limitations of specific population groups, which can serve as benchmarks for comparison.

To illustrate this point, we can look at the data presented in the following graphs, which show the increments of ten years and allow for easy comparison over time. The first bar charts display the general unhealthy days by male, female, and overall results in 1993, 2000, and 2010. Over the 17-year period, males' general unhealthy days in the US increased by 1.38 days, while females' unhealthy days increased by 1.61 days. Overall, the male population has 1.61 fewer healthy days than the female population.

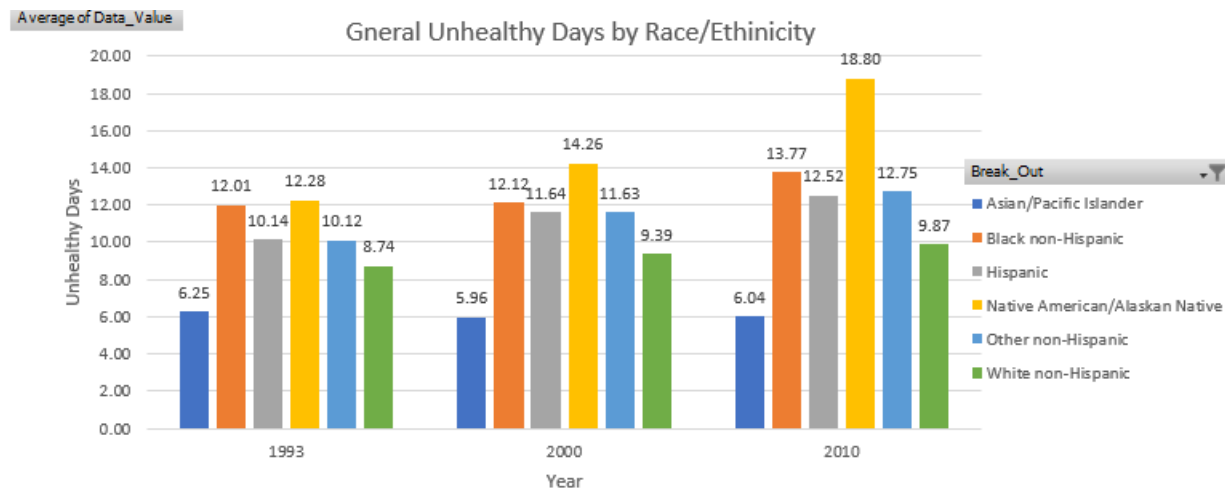


The second bar charts show the unhealthy days by age group. There are seven age groups starting age from 18 to 75 years above. The age group over 75 years old shows the highest unhealthy days, ranging from 18.48 to 20.88 days. However, the unhealthy days decreased by 2.4 days since 1993, as did the age group between 55 to 64. Conversely, the age group from 35 to 44 and from 45 to 54 showed the highest increase in unhealthy days with 2.22 and 2.4 days respectively.



The third bar charts display unhealthy days by race and ethnicity. Asian/Pacific islander groups have the least unhealthy days and are the healthiest group overall. In contrast, Native American /Alaskan native groups showed a tremendous increase in unhealthy days over the past ten years,

with this group having average 20 unhealthy days out of 30 days. The other ethnic groups showed an increase in unhealthy days ranging from 1.5 to 2.38 days over the 17-year period.



In conclusion, the data presented in these graphs provide valuable insight into the impact of demographic factors on quality of life. The south region has the most healthy days, and there has been a significant increase in unhealthy days for certain age and racial/ethnicity groups such as native American/ Alaskan Native. These data can serve as benchmarks for comparison, allowing us to identify areas where improvements are needed to enhance the quality of life.

Sources

Behavioral risk factor HRQOL - dataset by CDC. data.world. (2017, February 2). Retrieved March 28, 2023, from <https://data.world/cdc/behavioral-risk-factor-hrqol>

Mvalcic. (2018, January 20). *Add city, state, longitude, and latitude data.* Kaggle. Retrieved March 28, 2023, from <https://www.kaggle.com/code/mvalcic/add-city-state-longitude-and-latitude-data>

Index of /Geo/Pdfs/Maps-Data/Maps/Reference, <https://www2.census.gov/geo/pdfs/maps-data/maps/reference>.